

WNV-Related Weakness/Paralysis Syndromes

Unpublished Data from 2003

Introduction

In 2003 during the peak of the WNV epidemic in Colorado a small population based study was performed to better describe weakness/paralysis syndromes in WNV-infected patients. Such syndromes have not been documented in previous WNV outbreaks in Africa, Europe and the Middle East but were first seen in WNV-encephalitis cases in N.Y.C. in 1999.

The following is a synopsis of yet unpublished data from the study presented by James J. Sejvar, MD Division of Viral and Rickettsial Diseases National Center for Infectious Diseases Centers for Disease Control and Prevention, February 3, 2004 at the Fifth National Conference on West Nile Virus in the United States.

http://www.cdc.gov/ncidod/dybid/westnile/conf/pdf/Sejvar_2_04.pdf

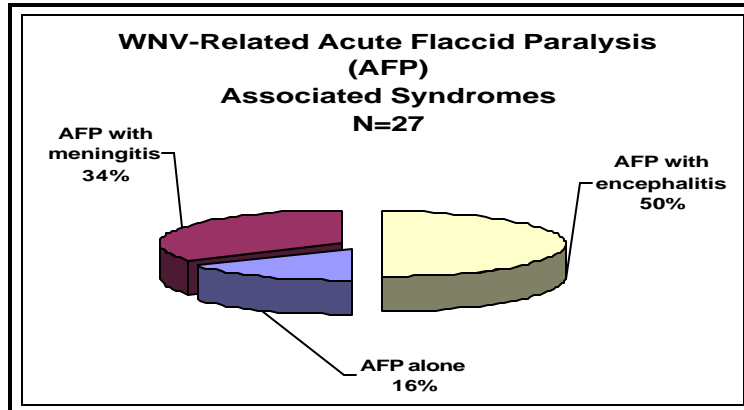
WNV-Related Weakness/Paralysis Syndromes

- 3 Major clinical Syndromes:
 - *Poliomyelitis-like syndrome; AKA acute flaccid paralysis (AFP)
 - Guillain-Barré syndrome
 - Brachial plexus dysfunction/neuritis
 - *most common syndrome*
- 2003 population-based study:
 - 3 Northern Colorado counties
 - 32 patients (median age 56)
 - 81% without comorbidity
 - 84% had poliomyelitis-like syndrome (AFP)
 - 53% had neuromuscular respiratory weakness (38% required intubation)

Clinical Features of AFP Syndrome (N=27)

- ✓ Asymmetric weakness (variety of patterns)
- ✓ No sensory deficits
- ✓ 14 cases EMG/NCS : anterior horn cell disease
- ✓ 11 patients had facial nerve palsy (9 bilateral)
- ✓ 3 cases (CT/MRI) : anterior spinal cord lesions
- ✓ 11 patients had respiratory weakness/failure

- ✓ WNV-related AFP is **not always** associated with meningitis and encephalitis:



Respiratory Weakness/Failure

- 53% of study patients (N=17) suffered respiratory weakness; 12 severe enough to require mechanical ventilation.
 - Suggests viral involvement of brainstem and upper C-spine
 - Dysarthria/dysphagia predictive for impending respiratory failure.
 - Average duration of mechanical ventilation =66 days.

Key Points

WNV-Related Weakness/Paralysis Syndromes

- Multiple manifestations and outcomes
- Not ALWAYS associated with meningitis/encephalitis
- CT/MRI: Image brain stem and upper c-spine
- Dysarthria and dysphasia predictive for respiratory failure
- “atypical” WNV presentations potential for huge burden on health care system

General WNV publications :

<http://www.cdc.gov/ncidod/dvbid/westnile/publications.htm>

Fifth National Conference on West Nile Virus in the United States (Feb 2004);

Presentations: http://www.cdc.gov/ncidod/dvbid/westnile/conf/February_2004.htm